



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

July 26, 2012

MEMORANDUM

SUBJECT: Contract Laboratory Program Data Review

Raymond Flores
FROM: Raymond Flores, Alternate ESAT Regional Project Officer
Environmental Services Branch (6MD-HL)

TO: Bret Kendrick, Superfund Project Manager (6SF-TR)

Site: MANUFACTURING SPECIALTIES INC.

Case#: 42562

SDG#: MF5WB4

The EPA Region 6 Environmental Services Branch ESAT data review team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review report.

The data package is acceptable for regional use. Problems, if any, are listed in the report narrative. If you have any questions regarding the data review report, please contact me at (281) 983-2139.



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ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: July 25, 2012

TO: Marvely Humphrey, ESAT PO, Region 6 EPA

FROM: Linda Hoffman, Data Reviewer, ESAT *[initials]*

THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *DGJ*

SUBJECT: CLP Data Review

Contract No.: EP-W-06-030
TO No.: 030
Task/Sub-Task: 2-12
ESAT Doc. No.: B030-212-0057
TDF No.: 6-12-396B
ESAT File No.: I-0546

Attached is the data review summary for Case # 42562
SDG # MF5WB4
Site Manufacturing Specialties, Inc.

COMMENTS:

I. LEVEL OF DATA REVIEW

Modified CADRE Review was performed for this data package.

II. CONTRACTUAL ASSESSMENT OF THE DATA PACKAGE

The CCS found the data package contractually compliant. However, hardcopy review detected the following contractually noncompliant item that affected data usability.

The laboratory did not perform the contract-required post-digestion matrix spike analysis for antimony, cadmium, copper, silver, and vanadium (ISM01.3, p. D-24/ICP-MS, sec. 12.6.5). As a result, the best assessment of data usability could not be made and the results could have been over qualified, including the rejection of the antimony results.

III. TECHNICAL USABILITY ASSESSMENT OF THE DATA PACKAGE

Some results were qualified for technical problems. The significant problems are addressed below.

A. Laboratory blank readings caused the qualification of three cyanide results

- B. The matrix spike recoveries for antimony, cadmium, and selenium were below the QC limit. The antimony results were qualified as unusable because of a very low recovery (<30%).

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10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO.	42562	SITE	Manufacturing Specialties, Inc.
LABORATORY	BONNER	NO. OF SAMPLES	7
CONTRACT#	EP-W-09-037	MATRIX	Soil
SDG#	MF5WB4	REVIEWER (IF NOT ESB)	ESAT
SOW#	ISM01.3	REVIEWER'S NAME	Linda Hoffman
SF#	303DD2A6DC	COMPLETION DATE	July 25, 2012

SAMPLE NO.	MF5WB4	MF5WC1	_____	_____	_____
	MF5WB8	MF5WC2	_____	_____	_____
	MF5WB9	MF5WC3	_____	_____	_____
	MF5WC0	_____	_____	_____	_____

DATA ASSESSMENT SUMMARY

	ICP	HG	CN
1. HOLDING TIMES	O	O	O
2. CALIBRATIONS	O	O	O
3. BLANKS	O	O	M
4. MATRIX SPIKES	M	O	O
5. DUPLICATE ANALYSIS	O	O	O
6. ICP QC	M		
7. LCS	O		
8. SAMPLE VERIFICATION	O	O	O
9. OTHER QC	N/A	N/A	N/A
10. OVERALL ASSESSMENT	M	O	M

O = Data had no problems.

M = Data qualified due to major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREAS OF CONCERN: Laboratory blank readings caused the qualification of three cyanide results. The pre-digestion matrix spike recoveries were below the QC limits for antimony, cadmium, copper, selenium, and silver, rendering the antimony results unusable. The pre-digestion matrix spike recovery was above the QC limit for vanadium. The iron serial dilution difference did not meet the expanded technical QC criteria for soils.

COMMENTS/CLARIFICATIONS
REGION 6 CLP QA REVIEW

CASE 42562 SDG MF5WB4 SITE Manufacturing Specialties, Inc.
LAB BONNER

COMMENTS: This SDG consisted of seven soil samples for total metals (by ICP-MS and ICP-AES), mercury, and cyanide analyses following CLP SOW ISM01.3. A sample was not designated for laboratory QC, so after contacting the SMO, the laboratory performed QC analyses on sample MF5WB4.

The SOW requires that the soil sample results be adjusted for moisture content and dilution, which raised the adjusted QLs above the CRQLs specified in the SOW. The adjusted CRQLs were reported by the laboratory and are referred to as SQLs in this report.

The target analytes of concern with the corresponding action levels in parentheses are arsenic (24.0 mg/kg), barium (8,000 mg/kg), chromium (33,000 mg/kg), lead (500 mg/kg), and mercury (3.6 mg/kg). None of the samples contained any of the analytes of concern at a concentration over the action level. The laboratory diluted 2X and reanalyzed all samples except sample MF5WC2 because of poor IS performance. The diluted reanalyses had acceptable IS performance, so the results associated with the outlying %RIs in the undiluted analyses were reported from the 2x diluted reanalyses. All samples were diluted up to 10X and reanalyzed because of high calcium, iron, and/or manganese concentrations.

Modified CADRE review was performed for this package as requested by the Region. For this review option, the CCS and CADRE primarily determine the laboratory contractual compliance and the technical usability of the sample results, respectively. The reviewer performs supplemental hardcopy forms checking and applies Region 6 guidelines, where necessary, to account for known limitations of the electronic review process. Therefore, the reviewer's final assessments may deviate from those found in the CADRE report. The CADRE narrative for the SDG is attached to this report as an addendum for additional information.

DATA ASSESSMENT: The QC problems affecting data usability are addressed below.

- Because of laboratory blank readings, the reviewer qualified the cyanide results >SQLs for samples MF5WB9 and MF5WC0 as undetected ("U"-flagged) and the reported concentrations should be used as raised quantitation limits ("C"-flagged).
- Because of laboratory blank readings, the reviewer qualified the cyanide result >SQL for sample MF5WB8 as estimated and biased high.
- Because of laboratory blank readings, the results <SQLs for the following analytes should be considered undetected and were flagged "U" at the SQLs on the DST: mercury, silver, thallium, and cyanide.

**INORGANIC QA REVIEW
CONTINUATION PAGE**

**CASE 42562 SDG MF5WB4 SITE Manufacturing Specialties, Inc.
LAB BONNER**

- The reviewer qualified the antimony results as unusable because the pre-digestion matrix spike recovery for antimony was below the 30% QC limit and the post-digestion matrix spike analysis was not performed.
- The pre-digestion matrix spike recoveries for cadmium, copper, and silver were below the 75% QC limit and the post-digestion matrix spike analysis was not performed. Therefore, the reviewer qualified the cadmium and copper results (all detects) as estimated and biased low and the silver results (all non-detects) as estimated.
- The reviewer qualified the selenium results as estimated because the pre-digestion matrix spike recovery for this analyte was below the 75% QC limit. The post-digestion matrix spike recovery for selenium did not indicate a bias effect.
- The reviewer qualified the vanadium results as estimated and biased high because the pre-digestion matrix spike recovery for vanadium was above the QC limit and the post-digestion matrix spike analysis was not performed.
- The reviewer qualified the iron results as estimated because the serial dilution difference for iron exceeded the expanded QC limit for soils.

OVERALL ASSESSMENT: Some results were qualified for all samples because of problems with laboratory blank readings, matrix spike recoveries, and/or a serial dilution difference. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the CSF, and the audit results were reported on the Evidence Inventory Checklist.

The laboratory was contacted for some reporting issues (see Resubmission Request). The laboratory response is not expected to impact the DST, so the DST included in this report is probably the final version.

INORGANIC ACRONYMS

CADRE	Computer-Aided Data Review and Evaluation
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CN	Cyanide
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DST	Data Summary Table
HG	Mercury
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICP-AES	Inductively Coupled Plasma-Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IS	Internal Standard
LCS	Laboratory Control Sample
MDL	Method Detection Limit
NFG	National Functional Guidelines
PE	Performance Evaluation
%D	Percent Difference
%R	Percent Recovery
%RI	Percent Relative Intensity
%RSD	Percent Relative Standard Deviation
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RPD	Relative Percent Difference
RSCC	Regional Sample Control Center
SDG	Sample Delivery Group
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
TAL	Target Analyte List

HEADER DEFINITIONS FOR INORGANIC EXCEL DST

CASE: Case Number
SDG: SDG Number
EPASAMP: EPA Sample Number
LABID: Laboratory File/Sample ID
MATRIX: Sample Matrix
QCCOD: Sample QC Code
SMPQUAL: Sample Qualifier
ANDATE: Sample Analysis Date
ANTIME: Sample Analysis Time
CASNUM: Compound CAS Number
ANALYTE: Compound Name
CONC: Compound Concentration
VALDQAL: Region 6 Inorganic Data Validation Qualifier (see
Inorganic Data Qualifier Definitions on the next page)
UNITS: Concentration Units
ADJCRQL: Adjusted Contract Required Quantitation Limit Value
SMPDATE: Sampling Date
PRPDATE: Sample Preparation Date
LRDATE: Laboratory Receipt Date
LEVEL: Sample Level
PERSOLD: Sample Percent Solids
SMPWTVL: Sample Weight (Soil Samples)/Initial Sample Volume (Water
Samples)
FINLVOL: Final Sample Volume
METHOD: Method of Analysis
STATLOC: Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, ADJCRQL, VALDQAL, and PERSOLD. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

INORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U** Not detected at reported quantitation limit.
- L** Reported concentration is between the MDL and the CRQL.
- J** Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, etc., or the result is below the CRQL.
- R** Result is unusable.
- F** A possibility of a false negative exists.
- UC** Reported concentration should be used as a raised quantitation limit because of blank effects and/or laboratory or field contamination.
- +** High biased. Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- W** The result should be used with caution. The result was reported on a dry weight basis although the sample did not conform to the EPA Office of Water definition of a soil sample because of its high water content (>70% moisture).

CASE	SDG	EPASAMP	LABID	MATRIX	QC CODE	AN DATE	AN TIME	CASNUM	ANALYTE	CONC	VALDQAL	UNITS	ADJCRQL	SMPDATE	PRPDATE	LRDATE	LEVEL	PERSOLD	SMPWTVL	FINVOL	METHOD	STATLOC
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7429905	Aluminum	28700		mg/kg	25.6	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440360	Antimony	2.6	UR	mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/06/2012	22:12:14	7440382	Arsenic	5.4		mg/kg	0.64	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440393	Barium	211		mg/kg	12.8	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440417	Beryllium	1.4		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440439	Cadmium	0.54	LJ-	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7440702	Calcium	25900		mg/kg	640	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/06/2012	22:12:14	7440473	Chromium	38.0		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440484	Cobalt	11.5		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440508	Copper	15.2	J-	mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7439896	Iron	19300	J	mg/kg	12.8	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7439921	Lead	108		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7439954	Magnesium	3820		mg/kg	640	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/06/2012	23:06:10	7439965	Manganese	806		mg/kg	6.4	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	16:27:06	7439976	Mercury	0.13	U	mg/kg	0.13	05/17/2012	06/07/2012	05/18/2012	Low	78.1	0.5	100	CV	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440020	Nickel	21.0		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7440097	Potassium	2840		mg/kg	640	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/06/2012	22:12:14	7782492	Selenium	0.91	LJ	mg/kg	3.2	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440224	Silver	1.3	UJ	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:38:27	7440235	Sodium	74.6	LJ	mg/kg	640	05/17/2012	06/03/2012	05/18/2012	Low	78.1	1	100	P	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440280	Thallium	1.3	U	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/06/2012	22:12:14	7440622	Vanadium	78.6	J+	mg/kg	3.2	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	06/07/2012	11:11:21	7440666	Zinc	138		mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.1	1	100	MS	SO-15
42562	MF5WB4	MF5WB4	1205265-01	S	Field_Sample	05/25/2012	12:54:34	57125	Cyanide	0.64	U	mg/kg	0.64	05/17/2012	05/25/2012	05/18/2012	Medium	78.1	1	50	AS	SO-15
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:55:39	7429905	Aluminum	30700		mg/kg	27.5	05/17/2012	06/03/2012	05/18/2012	Low	72.8	1	100	P	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440360	Antimony	2.7	UR	mg/kg	2.7	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/06/2012	22:28:49	7440382	Arsenic	6.2		mg/kg	0.69	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440393	Barium	164		mg/kg	13.7	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440417	Beryllium	1.4	LJ	mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440439	Cadmium	0.47	LJ-	mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:55:39	7440702	Calcium	17600		mg/kg	687	05/17/2012	06/03/2012	05/18/2012	Low	72.8	1	100	P	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/06/2012	22:28:49	7440473	Chromium	40.0		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440484	Cobalt	9.9		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440508	Copper	18.3	J-	mg/kg	2.7	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:55:39	7439896	Iron	20900	J	mg/kg	13.7	05/17/2012	06/03/2012	05/18/2012	Low	72.8	1	100	P	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7439917	Lead	31.4		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:55:39	7439954	Magnesium	4320		mg/kg	687	05/17/2012	06/03/2012	05/18/2012	Low	72.8	1	100	P	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/06/2012	23:10:19	7439965	Manganese	755		mg/kg	6.9	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	16:33:24	7439976	Mercury	0.14	U	mg/kg	0.14	05/17/2012	06/07/2012	05/18/2012	Low	72.8	0.5	100	CV	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440020	Nickel	20.1		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:55:39	7440097	Potassium	3630		mg/kg	687	05/17/2012	06/03/2012	05/18/2012	Low	72.8	1	100	P	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/06/2012	22:28:49	7782492	Selenium	0.85	LJ	mg/kg	3.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB8	1205265-02	S	Field_Sample	06/07/2012	11:28:53	7440224	Silver	1.4	UJ	mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	72.8	1	100	MS	SO-19
42562	MF5WB4	MF5WB9	1205265-03	S	Field_Sample	06/07/2012	11:33:20	7440393	Barium	189		mg/kg	13.9	05/17/2012	05/31/2012	05/18/2012	Medium	71.8	1	100	MS	SO-20
42562	MF5WB4	MF5WB9	1205265-03	S	Field_Sample	06/07/2012	11:33:20	7440417	Beryllium	1.5		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	71.8	1	100	MS	SO-20
42562	MF5WB4	MF5WB9	1205265-03	S	Field_Sample	06/07/2012	11:33:20	7440439	Cadmium	0.54	LJ-	mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	71.8	1	100	MS	SO-20
42562	MF5WB4	MF5WB9	1205265-03	S	Field_Sample	06/07/2012	11:59:57	7440702	Calcium	18900		mg/kg	696	05/17/2012	06/03/2012	05/18/2012	Low	71.8	1	100	P	SO-20
42562	MF5WB4	MF5WB9	1205265-03	S	Field_Sample	06/06/2012	22:28:59	7440473	Chromium	42.2		mg/kg	1.4	05/17/2012	05/31/2012	05/18/2012	Medium	71.8	1	100		

42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	12:04:16	7429905	Aluminum	24200	mg/kg	23.1	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21	
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440360	Antimony	2.3	UR	mg/kg	2.3	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/06/2012	22:37:07	7440382	Arsenic	11.1		mg/kg	0.58	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440393	Barium	141		mg/kg	11.6	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440417	Beryllium	0.63	LJ	mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440439	Cadmium	0.20	LJ	mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	13:14:59	7440702	Calcium	106000		mg/kg	1730	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/06/2012	22:37:07	7440473	Chromium	18.5		mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440484	Cobalt	10.4		mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440508	Copper	8.2	J-	mg/kg	2.3	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	12:04:16	7439896	Iron	16000	J	mg/kg	11.6	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7439921	Lead	22.5		mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	12:04:16	7439954	Magnesium	3180		mg/kg	578	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/06/2012	23:18:38	7439965	Manganese	935		mg/kg	5.8	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	16:37:58	7439976	Mercury	0.12	U	mg/kg	0.12	05/17/2012	06/07/2012	05/18/2012	Low	86.5	0.5	100	CV	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440020	Nickel	20.2		mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	12:04:16	7440097	Potassium	2920		mg/kg	578	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/06/2012	22:37:07	7782492	Selenium	0.43	LJ	mg/kg	2.9	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440224	Silver	1.2	UJ	mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	12:04:16	7440235	Sodium	48.3	LJ	mg/kg	578	05/17/2012	06/03/2012	05/18/2012	Low	86.5	1	100	P	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440280	Thallium	1.2	U	mg/kg	1.2	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/06/2012	22:37:07	7440622	Vanadium	51.9	J+	mg/kg	2.9	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	06/07/2012	11:37:48	7440666	Zinc	46.0		mg/kg	2.3	05/17/2012	05/31/2012	05/18/2012	Medium	86.5	1	100	MS	SO-21
42562	MF5WB4	MF5WC0	1205265-04	S	Field_Sample	05/25/2012	13:01:39	57125	Cyanide	0.68	UC	mg/kg	0.58	05/17/2012	05/25/2012	05/18/2012	Medium	86.5	1	50	AS	SO-21
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	12:08:35	7429905	Aluminum	22600		mg/kg	25.6	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440360	Antimony	2.6	UR	mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	22:41:16	7440382	Arsenic	5.3		mg/kg	0.64	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440393	Barium	135		mg/kg	12.8	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440417	Beryllium	1.1	LJ	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440439	Cadmium	0.22	LJ	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	12:21:28	7440702	Calcium	128000		mg/kg	2560	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	22:41:16	7440473	Chromium	39.7		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440484	Cobalt	10.4		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440508	Copper	10.2	J-	mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	12:08:35	7439896	Iron	19400	J	mg/kg	12.8	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	22:41:16	7439921	Lead	15.3		mg/kg	0.64	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	12:08:35	7439954	Magnesium	3280		mg/kg	639	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	23:22:48	7439965	Manganese	782		mg/kg	6.4	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	16:39:49	7439976	Mercury	0.13	U	mg/kg	0.13	05/17/2012	06/07/2012	05/18/2012	Low	78.2	0.5	100	CV	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440020	Nickel	18.6		mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	12:08:35	7440097	Potassium	3540		mg/kg	639	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	22:41:16	7440235	Sodium	84.7		mg/kg	639	05/17/2012	06/03/2012	05/18/2012	Low	78.2	1	100	P	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/06/2012	22:41:16	7440280	Thallium	0.64	U	mg/kg	0.64	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440666	Vanadium	96.1	J+	mg/kg	3.2	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	06/07/2012	11:42:16	7440666	Zinc	40.1		mg/kg	2.6	05/17/2012	05/31/2012	05/18/2012	Medium	78.2	1	100	MS	SO-22
42562	MF5WB4	MF5WC1	1205265-05	S	Field_Sample	05/25/2012	13:03:04	57125	Cyanide	0.64	U	mg/kg	0.64	05/17/2012	05/25/2012	05/18/2012	Medium	78.2	1	50	AS	SO-22
42562	MF5WB4	MF5WC2	1205265-06	S	Field_Sample	06/07/2012	13:10:33	7429905	Aluminum	8230		mg/kg	26.2	05/17/2012	06/03/2012	05/18/2012	Low	76.4	1	100	P	SO-23
42562	MF5WB4	MF5WC2	1205265-06	S	Field_Sample	06/06/2012	22:45:25	7440360	Antimony	1.3	UR	mg/kg	1.3	05/17/2012	05/31/2012	05/18/2012	Medium	76.4	1	100	MS	SO-23
42562	MF5WB4	MF5WC2	1205265-06	S	Field_Sample	06/06/2012	22:45:25	7440382														

42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:34:12	7429905	Aluminum	9830		mg/kg	25.2	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440360	Antimony	2.5	UR	mg/kg	2.5	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7440382	Arsenic	8.0		mg/kg	0.63	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440393	Barium	135		mg/kg	12.6	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440417	Beryllium	1.0	LJ	mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440439	Cadmium	0.55	LJ	mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:34:12	7440702	Calcium	8240		mg/kg	629	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7440473	Chromium	39.7		mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440484	Cobalt	9.1		mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440508	Copper	35.8	J-	mg/kg	2.5	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:39:14	7439896	Iron	36100	J	mg/kg	25.2	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7439921	Lead	46.1		mg/kg	0.63	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:34:12	7439954	Magnesium	8480		mg/kg	629	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 23:31:09	7439965	Manganese	755		mg/kg	6.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 16:43:36	7439976	Mercury	0.13	U	mg/kg	0.13	05/17/2012 06/07/2012 05/18/2012	Low	79.5	0.5	100	CV	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440020	Nickel	21.9		mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:34:12	7440097	Potassium	3620		mg/kg	629	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7782492	Selenium	0.81	LJ	mg/kg	3.1	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440224	Silver	1.3	UJ	mg/kg	1.3	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 13:34:12	7440235	Sodium	59.6	LJ	mg/kg	629	05/17/2012 06/03/2012 05/18/2012	Low	79.5	1	100	P	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7440280	Thallium	0.63	U	mg/kg	0.63	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/06/2012 22:49:33	7440622	Vanadium	83.2	J+	mg/kg	3.1	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	06/07/2012 11:46:41	7440666	Zinc	128		mg/kg	2.5	05/17/2012 05/31/2012 05/18/2012	Medium	79.5	1	100	MS	SO-24
42562	MF5WB4	MF5WC3	1205265-07	S	Field_Sample	05/25/2012 13:05:54	57125	Cyanide	0.63	U	mg/kg	0.63	05/17/2012 05/25/2012 05/18/2012	Medium	79.5	1	50	AS	SO-24

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No.	42562	SDG No.	MF5WB4	SDG Nos. To Follow	Mod. Ref. No.	Date Rec	06/08/12
EPA Lab ID:	BONNER		ORIGINALS		YES	NO	N/A
Lab location:	Hattiesburg, MS		CUSTODY SEALS				
Region:	6	Audit No.:	42562/MF5WB4		1. Present on package?	X	
Resubmitted CSF?	Yes	No	X	2. Intact upon receipt?		X	
Box No(s):	1		FORM DC-2				
COMMENTS:				3. Numbering scheme accurate?		X	
				4. Are enclosed documents listed?		X	
				5. Are listed documents enclosed?		X	
				FORM DC-1			
				6. Present?		X	
				7. Complete?		X	
				8. Accurate?		X	
				TRAFFIC REPORT/CHAIN-OF-CUSTODY RECORD(s)			
				9. Signed?		X	
				10. Dated?		X	
				AIRBILLS/AIRBILL STICKER			
				11. Present?		X	
				12. Signed?		X	
				13. Dated?		X	
				SAMPLE TAGS			
				14. Does DC-1 list tags as being included?		X	
				15. Present?		X	
				OTHER DOCUMENTS			
				16. Complete?		X	
				17. Legible?		X	
				18. Original?		X	
				18a. If "NO", does the copy indicate where original documents are located?			X
Over for additional comments							

Audited



Audited

Signature

Linda Hoffman/ESAT Data Reviewer

Date 07/24/12

Date _____

Printed Name/Title

DC-2

In Reference To Case No(s): 42562 SDG: MF5WB4 (I-0546)

**Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM**

Resubmission Request

Laboratory Name:	BONNER
Lab Contact:	Chris Bonner
Region:	6
Regional Contact:	Raymond Flores - EPA
ESAT Reviewer:	Linda Hoffman - ESAT

In reference to data for the following fractions:

ICP-AES ICP-MS CN ICP-AES/ICP-MS/HG

Summary of Questions/Issues:

A. ICP-AES

On the Form 13 on page 63, an "X" was entered under the "Se" column for sample MF5WB4 although selenium was not reported from the ICP-AES analysis. Please correct and resubmit this form.

B. ICP-MS

Selenium was entered twice on the Form 5A on page 32, Form 6 on pages 37 and 38 (duplicate of p. 37), and Form 8 on page 45. Please resubmit these Forms with only one selenium result reported.

C. CN

1. On the Form 1 on page 9 for sample MF5WB4, cyanide was not reported. Please resubmit this page with the cyanide result recorded.
2. On the Form 13 on page 67, sample MF5WB4 was omitted from the cyanide sequence. Please resubmit this page with sample MF5WB4 added.
3. According to the MDL data provided to the EPA, the MDL for cyanide for instrument CN02 is 2.3 ug/L. However, a result <MDL (1.9 ug/L) was reported for CCB01 on the Form 3 on page 28 instead of 10.0 U. Please correct and resubmit page 28.

Resubmission Request

Continuation Page 2
Laboratory/Contact BONNER/Chris Bonner
In Reference To Case No. 42562 **SDG:** MF5WB4

D. ICP-AES/ICP-MS/HG

The negative concentrations with absolute values >MDLs were not reported on the Form 3s for the ICBs, CCBs, and/or preparation blanks (ISM01.3, p. B-27, sec. 3.4.4.2.8). Please resubmit the Form 3s for the ICP-AES, ICP-MS, and HG analyses with the contract-required concentrations reported.

NOTE: Any submitted laboratory resubmission should be clearly marked as "Additional Data" with a cover letter included describing what data is being delivered, which Case the data pertains, and who requested the data (ISM01.3, p. B-8, sec. 2.2.1)... Custody seals are required for all such shipments.

Please respond to the above item **within 6 business days (ISM01.3, p. B-8, sec. 2.2)** by e-mail to Flores.Raymond@epa.gov and by regular mail to:

Mr. Raymond Flores
U.S. EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099

If you have any questions, please contact Mr. Flores at 281-983-2139.

Distribution: (1) Lab Copy, (2) Region Copy, and (3) ESAT Copy

USEPA CLP Inorganics COC (REGION COPY)

DateShipped: 5/17/2012

CarrierName: FedEx

Airbill No: 898735386580

CHAIN OF CUSTODY RECORD

MS

Case #: 42562

Cooler #: 1 of 1

No: 6-051712-104227-0008

Lab: Bonner Analytical Testing Company

Lab Contact: Patricia Aiken

Lab Phone: 601-264-2854

Special Instructions: Analytes for ICP-MS: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, zinc.

Shipment for Case Complete? Y

Analytes for ICP-AES: aluminum, calcium, iron, magnesium, potassium, sodium.

Samples Transferred From Chain of Custody #

Analysis Key: TM, Hg, CN=TAL Metals, Hg, CN: ICP AES + MS

ADDENDUM

CADRE NARRATIVE

National Functional Guidelines Report #03

Lab BONNER(Bonner Analytical Testing) SDG MF5WB4 Case 42562 Contract EPW09037 Region 6 DDTID 152782 SOW ISM01.3

Data Review Reports

Blanks

Blanks	CN
ND03	The following samples have analyte results greater than or equal to MDLs but less than CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated to CRQLs. MF5WB4, MF5WC1, MF5WC2, MF5WC3 Cyanide MF5WB4 , MF5WC1 , MF5WC2 , MF5WC3
Blanks	CN
ND04	The following samples have analyte results greater than or equal to MDLs but less than CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated to CRQLs. MF5WB4, MF5WC1, MF5WC2, MF5WC3 Cyanide MF5WB4 , MF5WC1 , MF5WC2 , MF5WC3
Blanks	CN
ND05	The following samples have analyte results greater than CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes. MF5WB4D, MF5WB4S, MF5WB8, MF5WB9, MF5WC0 Cyanide MF5WB4D , MF5WB4S , MF5WB8 , MF5WB9 , MF5WC0
Blanks	CN
ND06	The following samples have analyte results greater than CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes. MF5WB4, MF5WB4D, MF5WB4S, MF5WB8, MF5WB9, MF5WC0, MF5WC2 Cyanide MF5WB4 , MF5WB4D , MF5WB4S , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC2

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Data Review Reports

Blanks

Blanks	Hg
NE04	The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated to CRQLs.
	MF5WB4, MF5WB4D, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Mercury MF5WB4 , MF5WB4D , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2 , MF5WC3
Blanks	Hg
NE05	The following samples have analyte results greater than CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualify detected and nondetected analytes.
	MF5WB4S
	Mercury MF5WB4S

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Data Review Reports

Blanks

Blanks	ICP_AES
ND05	<p>The following samples have analyte results greater than CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes.</p> <p>LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3</p> <p>Potassium LCS01 , MF5WB4 , MF5WB4S , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2 , MF5WC3</p>
Blanks	ICP_AES
ND06	<p>The following samples have analyte results greater than CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes.</p> <p>MF5WC2, MF5WC3</p> <p>Magnesium MF5WC2 , MF5WC3</p>

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Data Review Reports

Blanks

Blanks	ICP_MS
ND03	The following samples have analyte results greater than or equal to MDLs but less than CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated to CRQLs. PBS01, MF5WB4S, MF5WC3, MF5WB4, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2 Antimony PBS01, MF5WB4S Silver MF5WC3, MF5WB4, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2
Blanks	ICP_MS
ND04	The following samples have analyte results greater than or equal to MDLs but less than CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated at CRQLs. PBS01, MF5WB4S, MF5WC3, MF5WB4, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2 Antimony PBS01, MF5WB4S Thallium MF5WC3, PBS01, MF5WB4, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2 Silver MF5WC3, MF5WB4, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2
Blanks	ICP_MS
ND05	The following samples have analyte results greater than CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes. MF5WC3, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, LCS01, MF5WC2 Cobalt MF5WC3, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1 Antimony LCS01 Silver LCS01, MF5WB4S Lead MF5WC3, LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2
Blanks	ICP_MS
ND06	The following samples have analyte results greater than CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualified detected and nondetected analytes. LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3 Chromium LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3 Cobalt MF5WC3, LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2 Antimony LCS01 Thallium LCS01, MF5WB4S Lead MF5WC3, LCS01, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2
Blanks	ICP_MS

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Data Review Reports

Blanks

Blanks	ICP_MS
NE04	The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Nondetected analytes are not qualified. Sample results are elevated to CRQLs. MF5WB4S, MF5WC3, MF5WB4, MF5WB4D, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2
	Antimony MF5WB4S
	Thallium MF5WC3 , MF5WB4 , MF5WB4D , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2
Blanks	ICP_MS
NE05	The following samples have analyte results greater than CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Use professional judgment to qualify detected and nondetected analytes. LCS01, MF5WB4S
	Antimony LCS01
	Thallium LCS01 , MF5WB4S

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Data Review Reports

Detection Limit

Detection Limit	CN
NDL1	The following samples have results greater than or equal to MDLs but less than CRQLs. Detected analytes are qualified J. MF5WB4, MF5WC1, MF5WC2, MF5WC3
	Cyanide MF5WB4 , MF5WC1 , MF5WC2 , MF5WC3

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Data Review Reports

Detection Limit

Detection Limit	Hg
NDL1	The following samples have results greater than or equal to MDLs but less than CRQLs. Detected analytes are qualified J.
	PBS01, MF5WB4, MF5WB4D, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Mercury PBS01 , MF5WB4 , MF5WB4D , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2 , MF5WC3

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Data Review Reports**Detection Limit**

Detection Limit	ICP_AES
NDL1	The following samples have results greater than or equal to MDLs but less than CRQLs. Detected analytes are qualified J. MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Sodium MF5WB4 , MF5WB4S , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2 , MF5WC3

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Data Review Reports

Detection Limit

Detection Limit	ICP_MS
NDL1	The following samples have results greater than or equal to MDLs but less than CRQLs. Detected analytes are qualified J.
	MF5WC3, MF5WB4, MF5WB4S, MF5WB4D, MF5WB4L, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, PBS01
	Selenium MF5WC3 , MF5WB4 , MF5WB4S , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2
	Beryllium MF5WC3 , MF5WB4L , MF5WC0 , MF5WC1
	Antimony PBS01 , MF5WB4S
	Thallium MF5WC3 , PBS01 , MF5WB4 , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2
	Cadmium MF5WC3 , MF5WB4 , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2
	Silver MF5WC3 , MF5WB4 , MF5WB4D , MF5WB4L , MF5WB8 , MF5WB9 , MF5WC0 , MF5WC1 , MF5WC2

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Lab	BONNER(Bonner Analytical Testing)	SDG	MF5WB4	Case	42562	Contract	EPW09037	Region	6	DDTID	152782	SOW	ISM01.3
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Data Review Reports

Matrix Spikes

Matrix Spikes	ICP_MS
NG06	The following Matrix Spike samples have percent recoveries less than 30% and there are no post-digestion spike samples performed. Detected analytes with results greater than or equal to MDLs are qualified J-. Nondetected analytes are qualified R. MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Antimony MF5WB4S
Matrix Spikes	ICP_MS
NG07	The following Matrix Spike samples have percent recoveries less than 30% and post-digestion spike samples have percent recoveries less than 75%. Detected analytes with results greater than or equal to MDLs are qualified J-. Nondetected analytes are qualified UJ. MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Selenium MF5WB4S
Matrix Spikes	ICP_MS
NG09	The following Matrix Spike samples have percent recoveries in the range of 30-74% and there are no post-digestion spike samples performed. Detected analytes with results greater than or equal to MDLs are qualified J-. Nondetected analytes are qualified UJ. MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Cadmium MF5WB4S
	Copper MF5WB4S
	Silver MF5WB4S
Matrix Spikes	ICP_MS
NG12	The following Matrix Spike samples have percent recoveries greater than 125% and there are no post-digestion spike samples performed. Detected analytes with results greater than or equal to MDLs are qualified J+. Nondetected analytes are not qualified. MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Vanadium MF5WB4S

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Data Review Reports

Serial Dilution

Serial Dilution	ICP_AES
NL031	The following ICP-AES Serial Dilution (SD) samples have percent difference (%D) greater than 10% and initial sample results are greater than 50xMDLs. The detected analytes in samples with results greater than or equal to MDLs are qualified J. Nondetected analytes in samples are qualified UJ.
	MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Calcium MF5WB4L
	Magnesium MF5WB4L
	Iron MF5WB4L

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Data Review Reports

Serial Dilution

Serial Dilution	ICP_MS
NL032	The following ICP-MS Serial Dilution (SD) samples have percent difference (%D) greater than 10% and initial sample results are greater than 50xMDLs. The detected analytes in samples with results greater than or equal to MDLs are qualified J. Nondetected analytes in samples are qualified U.
	MF5WB4, MF5WB8, MF5WB9, MF5WC0, MF5WC1, MF5WC2, MF5WC3
	Arsenic MF5WB4L
	Zinc MF5WB4L
	Cadmium MF5WB4L